

Two New Combinations in *Kengyilia* (Poaceae)

Cai Lian-bing

Northwest Plateau Institute of Biology, Academia Sinica, Xining, Qinghai 810001, People's Republic of China

ABSTRACT. Two new combinations are provided for Chinese species of Poaceae: *Kengyilia leiantha* (Keng) L. B. Cai and *Kengyilia kaschgarica* (D. F. Cui) L. B. Cai.

Kengyilia Yen & J. L. Yang (1990) was originally published as a new genus of the tribe Triticeae (Poaceae). Initially, the genus included only *K. gobiicola* Yen & J. L. Yang. Subsequently, Baum et al. (1991), Yang and Yen (1992), and Yang et al. (1992, 1993) not only added new species to the genus, but also transferred some species of *Roegneria* and *Agropyron* because the P genome in *Kengyilia* agrees with the P genome of the species of these genera, and in appearance these taxa possess similar morphological characters. The work of Yen and Yang (1990) and Yen et al. (1992, 1993) was accepted by most taxonomists. Chen et al. (1991) published an academic thesis in which they discussed the systematic position of the genus and the relationships among related genera, based on the micromorphology of the leaf epidermis, and concluded that the genus *Kengyilia* is a new branch derived from the primitive *Roegneria*.

Thus far, 19 species of *Kengyilia* have been reported. Most of the species are endemic to China, and they are mainly distributed on the Qinghai-Xizang Plateau and the contiguous zone north of the plateau. In external morphology, the genus *Kengyilia* has erect or slightly curved spikes often with dense spikelets, ovate-lanceolate or oblong glumes, and lemmas covered with hairs. The diagnostic characteristics of *Kengyilia* and its nearest related genera have been documented recently by Baum et al. (1995). Their key indicates that *Kengyilia* is distinguished from *Agropyron* by the glumes symmetric, not keeled, but midrib prominent, and from *Roegneria* and *Elymus* by the spikes crowded, with rachis internodes short, spikelets densely imbricated, and lemma awns up to 5 mm long. (If the spikes, spikelets, and lemma awns lack the aforementioned characters, then the genus differs from *Roegneria* by the glumes with prominent to slightly keeled midrib, and from *Elymus* by the palea shorter than the lemma, or if equal to the lemma then with an obtuse or retuse tip.) According to these

external characters, however, there still are two species that remain in *Roegneria* and *Elymus*, namely *R. leiantha* Keng and *E. kaschgaricus* D. F. Cui, that have close relationships to *Kengyilia*, and are remote to the original genus whether in the morphology of the spike or in the arrangement and constitution of the spikelet. The presence of these species in *Roegneria* and *Elymus* causes both overlap of characters and confusion of taxa. Therefore, in order to safeguard the uniformity of generic characteristics and the clarity of the demarcation between the genera, the two species should be assigned to the genus *Kengyilia*. The following are the two new combinations.

Kengyilia leiantha (Keng) L. B. Cai, comb. nov.
Basionym: *Roegneria leiantha* Keng, Acta Nanjing Univ. (Biol.) 3: 42. 1963. TYPE: China. Qinghai: Datongxian, Xiangshan, on the edge of a pool, alt. 2380 m, 3 July 1945, Hejing 758 (holotype, NJU).

Kengyilia kaschgarica (D. F. Cui) L. B. Cai, comb. nov. Basionym: *Elymus kaschgaricus* D. F. Cui, Bull. Bot. Research 10: 27. 1990. TYPE: China. "Xinjiang: Tashikurgan et Aheqi Xian, ad pratum alpinum frigidum crescens, alt. 2800–3800 m; 4 XII 1978, Exped., Xinjiang Northwest Inst. Bot. 922" (holotype, XJBI).

Literature Cited

- Baum, B. R., C. Yen & J. L. Yang. 1991. *Kengyilia habahenensis* (Poaceae: Triticeae)—A new species from the Altai Mountains, China. Pl. Syst. Evol. 174: 103–108.
- , ——— & ———. 1995. Taxonomic separation of *Kengyilia* (Poaceae: Triticeae) in relation to nearest related *Roegneria*, *Elymus*, and *Agropyron*, based on some morphological characters. Pl. Syst. Evol. 194: 123–132.
- Chen, S. L., Y. X. Jin & Z. J. Wu. 1991. On the leaf epidermis of gen. *Kengyilia* (Gramineae) in relation to its taxonomical significance. Bull. Nanjing Bot. Gard. Mem. Sun Yat Sen 1–6.
- Cui D. F. 1990. New taxa of *Elymus* L. from Xinjiang. Bull. Bot. Research 10: 25–38.
- Keng, Y. L. & S. L. Chen. 1963. A revision of the genus

- Roegneria* C. Koch of China. Acta Nanjing Univ. (Biol.) 3: 1-92.
- Yang, J. L. & C. Yen. 1992. A new species of *Kengyilia* from Xinjiang, China. J. Sichuan Agric. Univ. 10: 566-569.
- , —— & B. R. Baum. 1992. *Kengyilia*: Synopsis and key to species. Hereditas 116: 25-28.
- , —— & ——, 1993. Three new species of the genus *Kengyilia* (Poaceae: Triticeae) from West China and new combinations of related species. Canad. J. Bot. 71: 339-345.
- Yen, C. & J. L. Yang. 1990. *Kengyilia gobicola*, a new taxon from west China. Canad. J. Bot. 68: 1894-1897.